[**Differentiating with Web 2.0 Technologies**](http://www.techlearning.com/blogs_ektid34530.aspx)

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    Differentiation is a very important tool for educators to use in their classrooms to help students learn and succeed. Differentiation is a teacher’s response to learner’s needs and a recognition that all students learn differently, have differing backgrounds and varying levels of skills and knowledge. To differentiate learning means to create different paths for students to learn and achieve. To differentiate means to customize learning experiences for each student.

    Teachers can differentiate the content or process or product that the student receives and is expected to do in class. This is all based on the student’s readiness, interest, and background. The teacher can use different methods to share content to address the different learning styles such as visual, auditory, written, passive, active. Educators can also use different types of content to support the learners such as using multiple textbooks, web sites, videos and other resources.

They can also use different types of teaching, assignments and assessments in their classroom. Material may be presented via  lecture, video, discussion, inquiry lab or project. Student assignments and assessments can range from standard homework and written quizzes, to labs and projects. Students can also be given a choice as to how they can show their mastery of the content. Students could write a blog, create a presentation or web site, create a movie, write a paper, write a song, or many other choices. Let the students choose which way they would like to demonstrate their mastery of the topic. Give them ideas and support them in their efforts. Differentiation also makes students more active than passive, utilizing less lecture and more student projects.

    Technology is an excellent resource to help teachers support differentiation in their classroom. Technology can be a resource for extra help, a different way of presenting material and content, or a different way for students to demonstrate their learning and mastery. Here are some of my favorite technology tools to support differentiation in the classroom.   
  
Discovery Education <http://www.discoveryeducation.com/>

Discovery Streaming (fee-based) is an excellent resource for teachers to use in differentiating teaching and learning. There are videos and teacher’s guides to go with the videos. The videos show and explain topics in ways that a teacher can’t do in the classroom. There are also theme pages and lesson resources available. Teachers can create student accounts so that students can access the videos and other content on their own time as an assignment or for reinforcement. Videos also have closed-captioning to help with ELL students. Students can be assigned videos or other resources from Discovery Education through the same system.

There are also many free resources available from Discovery Education that any teacher can access. Go to Classroom Resources: <http://school.discoveryeducation.com/> (or log in and select) and you will see a huge number of free resources from Discovery Education. All of them can give you ideas and resources to differentiate learning in your classroom. Here are 10 of the 25 Free Resources available from Discovery Education:

1. Web 20.10 - <http://web2010.discoveryeducation.com/> - Access great content on Internet Safety, Media Literacy and links to Web 2.0 Tool. The site is rich with little flash videos detailing the explanation and use of Web 2.0 Tools in the classroom. This is a great resource for new teachers and veterans to learn about Web 2.0 tools.

2. New Teacher Survival Central - <http://discoveryeducation.com/survival/> - Includes Tech Tools for teachers and students, New teacher blogs, classroom tools, and curriculum resources, Tips/tricks on: Classroom Environment, Classroom Management, Parent Communication, Cool tips on Green Screens and more!

3.Science Fair Central - <http://school.discoveryeducation.com/sciencefaircentral/?campaign=SFC> - Great ideas how to create, launch and facilitate a Science Fair, including tips and ideas for student projects. The basic idea of these types of  projects could also be used in non-science classrooms.

4. Discovery Education Lesson Plans - <http://school.discoveryeducation.com/lessonplans/>- lesson plans for all different subjects, sorted by K-5, 6-8, and 9-12. Search different lesson plans to come up with ideas for new ways of teaching or assessing.

5. Siemens STEM Academy - <http://stem.discoveryeducation.com/> - Premier online community designed to foster student achievement in Science, Technology, Engineering and Math through the collaboration of STEM educators and sharing of best practices. Great resources, ideas, and more.

6. Kathy Schrock's guide for Educators -<http://school.discoveryeducation.com/schrockguide/> - Kathy Schrock's Guide for Educators is a categorized list of sites useful for enhancing curriculum and professional growth. It is updated often to include the best sites for teaching and learning.

7. Science of Everyday Life - <http://scienceofeverydaylife.discoveryeducation.com/> - Everywhere you look, there are wonders both big and small just waiting to be explored. Your school, your home, and your community are all boundless laboratories full of mystery, excitement and surprise. Join us as we uncover the magic all around us and tap the innovator within us…in the Science of Everyday Life. What a great way to connect science to students' lives and experiences by connecting science to everyday things. Non-science teachers could use this as a way to find connections between their class and science to engage more students.

8. Worksheets to Go -<http://school.discoveryeducation.com/teachingtools/worksheetgenerator/wtg/index.html> - great worksheets and activities for teachers to use. Sorted by subject and topic. Use these as expansion work for students or for students who don’t do well with projects.

9. Puzzlemaker- <http://puzzlemaker.discoveryeducation.com/> - create your own puzzles. Create and print customized word search, criss-cross, math puzzles, and more—using your own word lists. Have students create their own puzzles. They will certainly need to know all about the topics and words in order to create the puzzle and clues.

10. NASA at 50 - <http://discoveryeducation.com/NASAat50/> - NASA at 50 highlights key innovations and milestones in chemistry, physics, engineering, and space exploration from NASA's fifty-year history. Each clip serves as a gateway for further learning in science and history and promotes critical thinking and inquiry as essential components of scientific literacy. Students can enjoy NASA at 50 in video or audio formats that are compatible with common portable media players. In addition, teacher's guides are provided for each clip to facilitate integration of this exciting and engaging content into lesson plans. NASA also has  a huge amount of resources for teachers. Using NASA as a part of your classroom can help engage and excite your students.

Here is a list of Discovery Education Training resources: <http://goo.gl/GjWn>tohelp educators use Discovery Education’s tools and resources more effectively.

Project Based Learning is also another great way to differentiate teaching and learning. Project Based Learning (PBL) is a great way to teach students content, 21st century skills, and engage them in something fun and educational. I spoke more about PBL in an earlier article on Tech&Learning (<http://www.techlearning.com/blogs/17052>) and we had some great reader comments (Tech&Learning, May 2009, page 14). First of all, PBL can be used in any classroom, in any subject, at any grade level. Projects can be one class period, or take weeks to complete. Projects can address one curriculum item, or many. It all depends on how you want to implement it and how comfortable it is for you. PBL does take planning. You need to look at your curriculum and the objectives you want to accomplish and then plan a project that will lead your students to reach these objectives. Project Based Learning addresses multiple learning styles, teaches teamwork and critical thinking skills as well as content knowledge, and is a great measure of student mastery.More information on Project Based Learning - <http://goo.gl/M1ns>

PowerPoint, while sometimes vilified can be used to address multiple types of learning. In the presentation, you can have pictures, text, videos, and sound. You can print out slides for students to follow along with the lecture and you can post it online or print it out for absent students. This is a great resource for using PowerPoint in the Classroom - <http://www.actden.com/pp/>

Class web sites and blogs are also a great way to support student learning through differentiation. A class site or blog can have resources and help links, reminders for upcoming due dates, discussion forums and more. Students can also create a web site or blog as a assignment instead of a typical quiz, test, or paper. Creating a class web site or blog is very easy. Here’s a good place to start if you want to create a web site or blog: <http://goo.gl/m0bO>

Virtual Field Tripsare another good way to have students experience and learn in a way beyond the typical lecture. These can be used by the teacher with the whole class or by individual students. Here’s some tips on where to find some great virtual field trips.<http://goo.gl/3mVF>   
  
Many students are not the best at taking notes, or being organized. Google Calendar, Google Tasks (through Gmail) can both be used to keep students organized. There are also a lot of other great student resources online for students to use for studying and for staying organized [(http://www.techlearning.com/blogs/33782)](https://docs.google.com/document/d/1KhG0zxqSNCa4q2CfcLp7LM84zBr0mCgbtJT_8DOl6Hg/edit?hl=en&pli=1). By sharing these with your students, you offer them different ways of staying organized and being successful.   
  
 Evernote is free note-taking, web clipping, and organizing online tool. Students can use it to take notes, clip information from the web, upload files and connect to notes, and can even share notes with others (and the teacher can share notes with their students). Students can access their notes from any computer or smartphone. [http://www.evernote.com](http://www.evernote.com/)   
  
 The World Wide Web is full of other resources for educators to use to differentiate learning. Just do a search for “differentiation” or search for resources based on your own ideas for differentiating. Most teachers already differentiate, but technology can offer you many more options and many more resources for you and your students.  Utilize your PLN to find more resources and come up with more ideas on differentiation. And please share your resources and ideas here.   
  
Differentiation Resources  
Differentiation for High Ability Learners - <http://livebinders.com/play/present?id=19538>  
 great resource with ideas and lessons for differentiating for high ability learners in a general classroom.  
Differentiation Central - <http://www.differentiationcentral.com/>  
 another great resource with lesson plans, tools, and strategies for differentiating in the classroom.  
Wikipedia - <http://en.wikipedia.org/wiki/Differentiated_instruction>  
 This article from Wikipedia on Differentiated Instruction is a good place to get an overview of the topic as well as find some good links and resources.   
Teaching Every Student - <http://www.cast.org/teachingeverystudent/> - Understanding by Design site - this is another way to differentiate and make sure you are addressing all students.   
  
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